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EXAMINER

RASHID, DAVID

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/524,430	<b>Applicant(s)</b> PRYMUS ET AL.	
	<b>Examiner</b> DAVID P. RASHID	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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***Amendments***

[1] This office action is responsive to Reply to Office Action received on Sept. 23, 2008. Claims 1-34 remain pending.

***Response to Arguments***

[2] Remarks filed Sept. 23, 2008 with respect to claims 1-34 have been respectfully and fully considered, but are not found persuasive.

***Summary of Remarks regarding Rejections of claims 1-34 under 35. U.S.C. § 102(b)***

Since Beernink '438 does not describe the letter, word, shape, or other symbol, matched to the ink strokes input by the user, and Beernink '438 does not teach that the ink strokes input by the user are compared to characters 89 or style letters 95 in letter style screen 76, Beernink '438 fails to teach or suggest "comparing the handwritten pattern to a plurality of templates., wherein at least two of the plurality of templates comprise different ones of the plurality of writing symbol patterns which represent different ways of writing a single symbol," as recited in independent claim 1.

Applicant's Remarks at 4, Sept. 23, 2008.

However, the purpose of *Beernink ‘438* is to perform handwriting recognition in accordance with handwriting styles of various users (an extension of handwriting recognition in

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that the user writing is matched with various stored styles). The purpose of citing to fig. 6-8 (e.g., fig. 8, item 95) is to show an example of a handwriting style being stored in the tablet to be compared with the user's handwriting using a stylus (e.g., fig. 3). Fig. 6-8 is also an indicator that the user physically wrote that handwriting style that is now stored to later be compared at another time.

*Beernink '438* does describe a letter or symbol (e.g., fig. 8, item 95a) being compared with the user's handwriting inputted in fig. 3. The ink strokes input in fig. 3 are being compared to stored characters 89 or 95 because that is the primary use of the invention (to recognize handwriting of different users of a pen-based computer system).

In addition, an example of a template is the symbol "f" (just as another template would be symbol "g", etc. given in fig. 8, item 89). Each "alphabet" template (e.g., "f") contains at least two writing symbol patterns (i.e., a lowercase "f" and uppercase "F"), which are different ways of writing the letter "f" (also regarded as template "f" for having two writing symbol patterns immediately above).

Also, *Beernink '438* does not teach returning one of characters 89 or style letters 95 that is most similar to the ink strokes input by the user. Rather, *Beernink '438* discloses that "[a] user selects one of the characters 89 .... CPU 12 then displays style letters 95 for the selected character 89." *Beernink '438*, column 10, lines 13-19. Since *Beernink '438* does not teach returning one of characters 89 or style letters 95 that is most similar to the ink strokes input by the user, *Beernink '438* fails to teach or suggest "returning a best template selected from the plurality of templates that represents one of the plurality of writing symbol patterns as a best writing symbol pattern which., is most similar to the handwritten pattern," as recited in independent claim 1.

#### Remarks at 4-5.

However, the purpose of *Beernink '438* is to perform handwriting recognition in accordance with handwriting styles of various users. For example, guest letter styles are given at fig. 8, item 95 such that the user's writing is compared to the guest letter styles using various templates (e.g., letters "f", "g", etc). The actual intended purpose of *Beernink '438* to disclose fig. 8 is to show a preference screen to change/view the guest handwriting style. The Examiner refers to fig. 8 in the rejection to show the various types of templates, writing symbol patterns, etc in the claim language being used in an underlying manner. If a user writes "F" on fig. 3, item 52, that letter "F" will be matched against guest templates as shown in fig. 8, item 95, and will

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return the best writing symbol pattern (i.e., capital "F") from template (letter "f"). That best writing symbol pattern, once recognized according to the proper "style" by the user, will then be recognized and converted to digital font (e.g., fig. 2, item T).

Applicant also respectfully requests clarification as to the Examiner's interpretation of style letters 95 of Beernink '438. On page 2 of the Office Action, the Examiner states, "a handwritten pattern ("ink strokes input" at 7:19-21; e.g., fig. 8, item 95)," indicating that style letters 95 of Beernink '438 correspond to a handwritten pattern. Yet on page 3 of the Office Action, the Examiner states, "wherein each of the plurality of templates (e.g., template "f" in fig. 8) represents at least one of a plurality of writing symbol patterns (e.g., template "f" comprises four writing symbol patterns including items 95, 95b)," indicating that style letters 95 of Beernink '438 correspond to a plurality of writing symbol patterns. However, the claimed "handwritten pattern" and "plurality of writing symbol patterns" are separate elements of independent claim 1, and thus, it is improper for the Examiner to apply a single element, style letters 95, against those separate elements.

#### Remarks at 5.

See above for clarification. The handwritten pattern is what is written on fig. 3, item 52 by the user. The purpose of fig. 6-8 is to indicate examples of what the handwritten pattern in being matched against (e.g., fig. 6a shows a preferences box to see what custom template and writing symbol pattern styles look like). The Examiner emphasizes that the claims are broad enough to read that if a template were to be interpreted as a English alphabet character, and a writing symbol pattern were to be its lowercase of uppercase format, then *Beernink* '438 reads on the claims (matching these custom styles against the user's own handwriting on fig. 3, item 52). The Examiner also emphasizes that the claims are broad enough to allow an separate interpretation using *Beernink* '439 (see below rejection using *Beernink* '439 wherein a template is regarded not as a single English alphabet character such as "f", but a whole word such as "Current").

The same argument applies to claims 33 and 34.

#### Summary of Remarks regarding Rejections of claims 1-34 under 35. U.S.C. § 103(a)

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Applicant's arguments with respect to *Beernink*'438 in view of *Sparr* (Remarks at 6-7); *Beernink*'438 in view of *Beernink*'439 and *Kadashevich* (Remarks at 10-11); and *Beernink*'438 in view of *Beernink*'439 and *Sparr* (Remarks at 11-12) have been withdrawn in light of the primary reference *Beernink*'439 rejections below.

However, *Beernink* ~438 does not teach or suggest that the ink strokes input by a user are compared to characters 89. Thus, characters 89 in letter style screen 76 cannot correspond to the claimed "plurality of templates," since independent claim 1 recites the step of "comparing the handwritten pattern to a plurality of templates." In view of the mischaracterization of *Beernink*'438, above, the Examiner has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the invention of independent claim 1. Thus, the Examiner has failed to clearly articulate a reason why claims 9, 10, and 12-14, which depend from independent claim 1, would have been obvious to one of ordinary skill in the art in view of the prior art.

Remarks at 9-10.

However, see above argument over the interpretation in the rejection of "handwritten pattern", "plurality of templates", and "writing symbol pattern" used in the *Beernink*'438 prior art reference. *Beernink*'438 does disclose that the ink strokes input by a user are compared to characters 89 (with e.g. guest style item 95 for character "f" listed in character list 89). See *Beernink*'438 at 2:30-50 (citing overall summary of identifying the user as either a guest or primary user, and thus recognizing the user's handwriting on the tablet accordingly according to that specific user style, with the addition of learning recognition).

***Claim Rejections - 35 USC § 101***

[3] 35 U.S.C. § 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

*In Re Bilski – "Tied To" Criteria*

[4] **Claims 1-32** are rejected under 35 U.S.C. § 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent<sup>1</sup> and recent Federal Circuit

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<sup>1</sup> *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

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decisions<sup>2</sup> indicate that a statutory “process” under 35 U.S.C. § 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

A process must have a meaningful tie to an “apparatus”, or “machine”. Insignificant pre- or post-solution activity involving an “apparatus”, or “machine” is not a meaningful tie.

“Detecting a handwritten pattern that is entered by a user” and then “presenting the best writing symbol pattern of the best template on a screen” (claim 1 at ll. 3, 13; emphasis added) is not a meaningful tie significant to the basic inventive concept, but rather insignificant pre- or post-activity. Claim 15 is rejected by similar reasoning. Claims 2-14 and 16-32 are rejected for failing to alleviate the deficiency of their respective dependent claims.

### ***Claim Rejections - 35 U.S.C. § 102***

[5] The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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<sup>2</sup> *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

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Beernink '438

[6] **Claims 1-6, 8, 11, and 33** are rejected under 35 U.S.C. § 102(n) as being anticipated by U.S. Patent No. 5,666,438 (issued Sep. 9, 1997, hereinafter “Beernink ‘438”).

Regarding **claim 1**, *Beernink '438* discloses a method for presenting a recognized handwritten symbol (fig. 6a; “handwriting recognition” at 2:13-15), comprising the steps of:

detecting (“recognizer implemented by CPU 12 to recognize ink strokes input by a user with stylus 38” at 7:19-21) a handwritten pattern (“ink strokes input” at 7:19-21; *e.g.*, fig. 8, item 95) that is entered by a user (fig.3);

recognizing (“handwriting recognition” at 2:13-15) the detected handwritten pattern, wherein said step of recognizing comprises comparing (the handwriting is compared to each of the templates) the handwritten pattern to a plurality of templates (fig. 8, item 89; *e.g.*, selected character “f” is a template),

wherein each of the plurality of templates (*e.g.*, template “f” in fig. 8) represents at least one of a plurality of writing symbol patterns (*e.g.*, template “f” comprises four writing symbol patterns including items 95, 95b) of ways of writing symbols (the English alphabet), and

returning a best template (“handwriting recognition is optimized” at 2:47-49) selected from the plurality of templates (fig. 8, item 89; *e.g.*, selected character “f” is a template) that represents one of the plurality of writing symbol patterns (*e.g.*, template “f” comprises four writing symbol patterns including items 95, 95b) as a best writing symbol pattern which, according to a predefined rule, is most similar to the handwritten pattern (once “Letter Style” preferences are saved, *Beernink '438* uses those preferences to recognize characters),

wherein at least two of the plurality of templates comprise different ones of the plurality of writing symbol patterns which represent different ways of writing a single symbol (each character in list item 89 has four writing symbol patterns item 95; these four writing symbol patterns are accountable for the plurality of templates of “Letter Styles” for each user); and

presenting the best writing symbol pattern of the best template on a screen (fig 3, item 52; “handwriting recognition” at 2:13-15).



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## EXAMINER'S INTERPRETATION

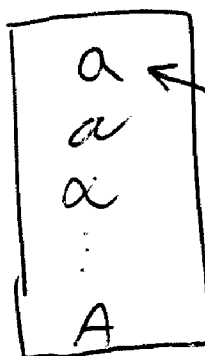
CLAIM 1

① user writes

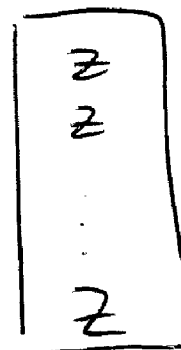


handwritten pattern

② templates → "a"

writing symbol  
pattern "a"

"z"

writing sym  
pattern "

③ best template selected → "a"

best writing symbol pattern →



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Beernink '439

[7] **Claims 1-6, 8, 11, and 33** are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,682,439 (issued Oct. 28, 1997, hereinafter “Beernink ‘439”).

Regarding **claim 1**, *Beernink '439* discloses a method for presenting a recognized handwritten symbol (e.g., handwritten symbols being the English alphabet symbols using item 110 at fig. 2), comprising the steps of:

detecting a handwritten pattern (e.g., fig. 6, item 172; “Correct”) that is entered by a user (user uses fig. 2, item 106);

recognizing (fig. 6, list items 170; item 172 as a result of recognizing the actual handwritten pattern on fig. 2, item 106) the detected handwritten pattern (e.g., fig. 6, item 172; “Correct”),

wherein said step of recognizing comprises comparing the handwritten pattern to a plurality of templates (fig. 6, item 170; e.g., template1 being “Correct”, template2 being “correct”, template3 being “Currect”, template4 being “Cwrect”, template5 being “currect”),

wherein each of the plurality of templates represents at least one of a plurality of writing symbol patterns (e.g., fig. 6, item 170 is composed of “C”, “c”, “o”, “r”, “u”, “w”, “t”, etc. in each of the templates; e.g., template4 comprised of “C”, “w”, “r”, “e”, “c”, “t”) of ways of writing symbols (symbols being the English alphabet symbols; e.g., symbol “c” being writing symbol patterns “C” and “c”), and

returning a best template (top template “Correct” at item 170, fig. 6) selected from the plurality of templates (fig. 6, item 170; e.g., template1 being “Correct”, template2 being “correct”, template3 being “Currect”, template4 being “Cwrect”, template5 being “currect”) that represents one of the plurality of writing symbol patterns (e.g., writing symbol pattern “C” in best template “Correct” selected, not writing symbol pattern “c”, thus “C” being the best writing symbol pattern when template1 is selected as the best template) as a best writing symbol pattern which, according to a predefined rule, is most similar to the handwritten pattern (inherent rules must exist such that writing symbol pattern “C” in best template “Correct” on list 170 was selected),

wherein at least two of the plurality of templates (e.g., item 170 contains template1 “Correct” and template2 “correct”) comprise different ones of the plurality of writing symbol

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patterns which represent different ways of writing a single symbol (symbols being the English alphabet symbols; e.g., symbol “c” being writing symbol patterns “C” and “c”); and

presenting the best writing symbol pattern (e.g., writing symbol pattern “C” in best template “Correct” selected, not writing symbol pattern “c”, thus “C” being the best writing symbol pattern) of the best template (top template “Correct” at item 170, fig. 6) on a screen (fig. 6, item 151; fig. 2, item 44).

Regarding **claim 2**, *Beernink* ‘439 discloses the method according to claim 1, wherein each of the plurality of writing symbol patterns (e.g., fig. 6, item 170 is composed of “C”, “c”, “o”, “r”, “u”, “w”, “t”, etc. in each of the templates) of a template (fig. 6, item 170; e.g., template1 being “Correct”, template2 being “correct”, template3 being “Currect”, template4 being “Cwrect”, template5 being “current”) is represented by geometrical information (it is implicit if not already inherent that each of the plurality of writing symbol patterns of a template is “represented by geometrical information” as each of the plurality of writing symbol patterns of a template consists of geometrical information such as height, width, etc – i.e., item 170 requires geometric information) relating to an appearance of each of said plurality of writing symbol patterns.

Regarding **claim 3**, *Beernink* ‘439 discloses the method according to claim 2, wherein the geometrical information (it is implicit if not already inherent that each of the plurality of writing symbol patterns of a template is “represented by geometrical information” as each of the plurality of writing symbol patterns of a template consists of geometrical information such as height, width, etc – e.g., item 170 requires geometric information) comprises information of positions of a number of dots (it is again inherent that the tablet-screen 44 of fig. 2 will pick up individual pixels from which the user writes, each pixel being a dot that represents additional positional information on the tablet-screen) representing each of the plurality writing symbol patterns (e.g., fig. 6, item 170 is composed of “C”, “c”, “o”, “r”, “u”, “w”, “t”, etc. in each of the templates), said each of the plurality of writing symbol patterns being presented by lines (a stroke of a character written on tablet-screen 44 of fig. 2 will contain a string of pixels (dots) that are presented by lines drawn between the pixels, fig. 6, item 172 for instance) drawn between the dots.

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Regarding **claim 4**, *Beernink '439* discloses wherein the step of presenting comprises presenting the whole best writing symbol pattern (e.g., writing symbol pattern “C” in best template “Correct” selected, not writing symbol pattern “c”, thus “C” being the best writing symbol pattern) represented by the best template (top template “Correct” at item 170, fig. 6) at once.

Regarding **claim 5**, *Beernink '439* discloses the method according to claim 3, wherein the step of presenting comprises presenting the lines one at a time (each time the user writes a stroke to be recognized, that stroke consists of pixels (dots) and lines between the pixels, and each time the user writes a new stroke another line is constructed and thus lines are being presented one at a time).

Regarding **claim 6**, *Beernink '439* discloses the method according to claim 1, further comprising, before the step of presenting, manipulating (manipulation occurs when transforming “C” at item 172 to the “C” at fig. 170) the best writing symbol pattern (e.g., writing symbol pattern “C” in best template “Correct” selected, not writing symbol pattern “c”, thus “C” being the best writing symbol pattern) of the best template (top template “Correct” at item 170, fig. 6) according to characteristics of the handwritten pattern (e.g., fig. 6, item 172; “Correct”).

Regarding **claim 8**, *Beernink '439* discloses the method according to claim 1, wherein the handwritten pattern (e.g., writing symbol pattern “C” in best template “Correct” selected, not writing symbol pattern “c”, thus “C” being the best writing symbol pattern) is entered on an input area (e.g., fig. 3, item 151) on the screen (fig. 2, item 44; fig. 6, item 151) and the best writing symbol pattern (e.g., writing symbol pattern “C” in best template “Correct” selected, not writing symbol pattern “c”, thus “C” being the best writing symbol pattern) of the best template (top template “Correct” at item 170, fig. 6) is presented in a presentation area (fig. 6, item 168) on the screen (fig. 2, item 44; fig. 6, item 151), whereby said presentation area (fig. 6, item 168) overlaps the input area (when the recognition of the handwriting updates, it is performed right over the same spot, thus overlapping).

Regarding **claim 9**, *Beernink '439* discloses the method according to claim 1, wherein the step of recognizing comprises returning at least one alternative template (e.g., template5 being “current” alternative from template1 being “Correct” as listed on item 170) selected from the

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plurality of templates (fig. 6, item 170; e.g., template1 being “Correct”, template2 being “correct”, template3 being “Currect”, template4 being “Cwrect”, template5 being “currect”).

Regarding **claim 10**, *Beernink '439* discloses the method according to claim 9, wherein the step of presenting the at least one of the plurality of writing symbol patterns (e.g., fig. 6, item 170 is composed of "C", "c", "o", "r", "u", "w", "t", etc. in each of the templates) of the at least one alternative template (e.g., template5 being “currect” alternative from template1 being “Correct” as listed on item 170) at a request of a user (“word 164 being selected to invoke a pop-up corrector 168” at 10:17-30).

Regarding **claim 11**, *Beernink '439* discloses the method according to claim 1, wherein each of the plurality of templates is associated with a category (a category is a character from the English alphabet, each category comprised of different user styles writing it, and whether it is uppercase, lowercase, etc) defining what kind of symbol is represented by each of the plurality of templates.

Regarding **claim 12**, *Beernink '439* discloses the method of claim 11, wherein the step of presenting comprises masking the presentation of the presented interpretation according to which category the best interpretation is associated with (the masking is performed in step 170 of fig. 6 of the best interpretation being presented being the top of the list, among other possibilities of which include "C" and "c" for the character "C").

Regarding **claim 13**, *Beernink '439* discloses the method of claim 12, wherein the category (“C” is “associated” with the capitalized letter category in fig. 6, item 170) is indicated by a certain color of a background (the background color is white that indicates “C” is capitalized) to the at least one of the plurality of writing symbol patterns represented by the presented interpretation (presented interpretations being those listed in item 170, fig. 6 with the top on the list being the best interpretation).

Regarding **claim 14**, *Beernink '439* discloses the method of claim 13, wherein the category (“C” is “associated” with the capitalized letter category in fig. 6, item 170) is indicated by a certain color of the at least one of the plurality of writing symbol patterns (the color is black that indicates “C” is capitalized) represented by the presented interpretation (presented interpretations being those listed in item 170, fig. 6 with the top on the list being the best interpretation).

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Regarding **claim 15**, *Beernink* '439 discloses a method for presenting a recognized handwritten symbol (e.g., handwritten symbols being the English alphabet symbols using item 110 at fig. 2), comprising the steps of:

detecting a handwritten pattern (e.g., fig. 6, item 172; "Correct") that is entered by a user (user uses fig. 2, item 106);

recognizing (fig. 6, list items 170; item 172 as a result of recognizing the actual handwritten pattern on fig. 2, item 106) the detected handwritten pattern (e.g., fig. 6, item 172; "Correct"),

wherein said step of recognizing comprises comparing the handwritten pattern to a plurality of templates (fig. 6, item 170; e.g., template1 being "Correct", template2 being "correct", template3 being "Currect", template4 being "Cwrect", template5 being "current"),

wherein each of the plurality of templates represents at least one of a plurality of writing symbol patterns (e.g., fig. 6, item 170 is composed of "C", "c", "o", "r", "u", "w", "t", etc. in each of the templates; e.g., template4 comprised of "C", "w", "r", "e", "c", "t") of ways of writing symbols (symbols being the English alphabet symbols; e.g., symbol "c" being writing symbol patterns "C" and "c"), and

returning a best interpretation (fig. 6, item 168 wherein the top of the list "Correct" is the best interpretation) of the handwritten pattern (e.g., fig. 6, item 172; "Correct"), said best interpretation (fig. 6, item 168 wherein the top of the list "Correct" is the best interpretation) being based on one of the plurality of writing symbol patterns (e.g., fig. 6, item 170 is composed of "C", "c", "o", "r", "u", "w", "t", etc. in each of the templates; e.g., template4 comprised of "C", "w", "r", "e", "c", "t") as a best writing symbol pattern (e.g., writing symbol pattern "C" in best template "Correct" selected, not writing symbol pattern "c", thus "C" being the best writing symbol pattern) of a best template (top template "Correct" at item 170, fig. 6) selected from the plurality of templates (fig. 6, item 170; e.g., template1 being "Correct", template2 being "correct", template3 being "Currect", template4 being "Cwrect", template5 being "current") that, according to a predefined rule, is most similar to the handwritten pattern (inherent rules must exist such that writing symbol pattern "C" in best template "Correct" on list 170 was selected),

wherein at least two of the plurality of templates (e.g., item 170 contains templates "Correct" and "correct") comprise different ones of the plurality of writing symbol patterns

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which represent different ways of writing a single symbol (symbols being the English alphabet symbols; e.g., symbol “c” being writing symbol patterns “C” and “c”),

and wherein the different ones of the plurality of writing symbol patterns (e.g., fig. 6, item 170 is composed of "C", "c", "o", "r", "u", "w", "t", etc. in each of the templates; e.g., template4 comprised of “C”, “w”, “r”, “e”, “c”, “t”) of said at least two of the plurality of templates (fig. 6, item 170; e.g., template1 being “Correct”, template2 being “correct”, template3 being “Currect”, template4 being “Cwrect”, template5 being “currect”) return different best interpretations (the second interpretation “correct”, 2<sup>nd</sup> from the top of the list contains alternate writing symbol patterns "C" and "c") when being most similar to the handwritten pattern (e.g., fig. 6, item 172; “Correct”); and

presenting the best interpretation (fig. 6, item 168 wherein the top of the list “Correct” is the best interpretation) on a screen (fig. 6, item 151; fig. 2, item 44).

Regarding **claim 16**, *Beernink* ‘439 discloses further comprising, before the step of presenting, retrieving as the best interpretation (fig. 6, item 168 wherein the top of the list “Correct” is the best interpretation), from a database comprising allographs, a best allograph (the best allograph is the digital font letter of “C” that is it converted to (e.g., the text written in fig. 6, item 172 is converted to digital font)) that is associated with the best writing symbol pattern (e.g., writing symbol pattern “C” in best template “Correct” selected, not writing symbol pattern “c”, thus “C” being the best writing symbol pattern) of the best template (top template “Correct” at item 170, fig. 6).

Regarding **claim 18**, *Beernink* ‘439 discloses wherein the step of presenting comprises presenting the best allograph (the best allograph is the digital font letter of “C” that is it converted to (e.g., the text written in fig. 6, item 172 is converted to digital font)) represented by a number of arcs (it is inherent that each allograph is “represented by a number of arcs” as each allograph consists of a series of arcs) depicting the way of writing symbols of the best template.

Regarding **claim 19**, *Beernink* ‘439 discloses wherein the best interpretation (fig. 6, item 168 wherein the top of the list “Correct” is the best interpretation) is the writing symbol pattern of the best template (top template “Correct” at item 170, fig. 6), and wherein the step of presenting comprises presenting the best writing symbol pattern (e.g., writing symbol pattern “C” in best template “Correct” selected, not writing symbol pattern “c”, thus “C” being the best

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writing symbol pattern) of a best template (top template “Correct” at item 170, fig. 6) of the best template on the screen (fig. 6 screen).

Regarding **claim 20**, claim 2 recites identical features as in claim 20. Thus, references/arguments equivalent to those presented below for claim 2 are equally applicable to claim 20.

Regarding **claim 21**, claim 3 recites identical features as in claim 21. Thus, references/arguments equivalent to those presented below for claim 3 are equally applicable to claim 21.

Regarding **claim 22**, *Beernink '439* discloses wherein the step of presenting comprises presenting the whole best writing symbol pattern (e.g., writing symbol pattern “C” in best template “Correct” selected, not writing symbol pattern “c”, thus “C” being the best writing symbol pattern) represented by the best interpretation (fig. 6, item 168 wherein the top of the list “Correct” is the best interpretation) at once.

Regarding **claim 23**, claim 5 recites identical features as in claim 23. Thus, references/arguments equivalent to those presented below for claim 5 are equally applicable to claim 23.

Regarding **claim 24**, *Beernink '439* discloses further comprising, before the step of presenting, manipulating (manipulation occurs when transforming “C” at item 172 to the “C” at fig. 170) the best writing symbol pattern (e.g., writing symbol pattern “C” in best template “Correct” selected, not writing symbol pattern “c”, thus “C” being the best writing symbol pattern) represented by the best interpretation (fig. 6, item 168 wherein the top of the list “Correct” is the best interpretation) according to characteristics of the handwritten pattern (e.g., fig. 6, item 172; “Correct”).

Regarding **claim 26**, *Beernink '439* discloses wherein the handwritten pattern is entered on an input area (e.g., fig. 3, item 151) on the screen (fig. 2, item 44; fig. 6, item 151) and the best interpretation (fig. 6, item 168 wherein the top of the list “Correct” is the best interpretation) is presented in a presentation area (fig. 6, item 168) on the screen (fig. 2, item 44; fig. 6, item 151), whereby said presentation area overlaps the input area (when the recognition of the handwriting updates, it is performed right over the same spot, thus overlapping).



Regarding **claim 27**, *Beernink '439* discloses wherein a step of recognizing comprises returning at least one alternative interpretation (e.g., handwritten “Correct” item 172 returns list item 170, the letter “C” in “Correct” returns templates “Correct” and “correct”).

Regarding **claim 28**, *Beernink '439* discloses presenting the at least one of the plurality of writing symbol patterns (e.g., fig. 6, item 170 is composed of "C", "c", "o", "r", "u", "w", "t", etc. in each of the templates) of the at least one alternative interpretation (e.g., handwritten “Correct” item 172 returns list item 170, the letter “C” in “Correct” returns templates “Correct” and “correct”) at a request of a user (the use requested the list item 170).

Regarding **claim 29**, *Beernink '439* discloses wherein the best interpretation (fig. 6, item 168 wherein the top of the list “Correct” is the best interpretation) is associated with a category (a category is a character from the English alphabet, each category comprised of different user styles writing it, and whether it is uppercase, lowercase, etc) defining what kind of symbol is represented by each of the plurality of templates (fig. 6, item 170; e.g., template1 being “Correct”, template2 being “correct”, template3 being “Currect”, template4 being “Cwrect”, template5 being “currect”).

Regarding **claim 30**, *Beernink '439* discloses wherein the step of presenting comprises masking the presentation of the best interpretation (fig. 6, item 168 wherein the top of the list “Correct” is the best interpretation)) according to which category (a category is a character from the English alphabet, each category comprised of different user styles writing it, and whether it is uppercase, lowercase, etc) the best interpretation (fig. 6, item 168 wherein the top of the list “Correct” is the best interpretation) is associated with (the masking is performed in step 170 of fig. 6 of the best interpretation being presented being the top of the list, among other possibilities of which include "C" and "c" for the character "C").

Regarding **claim 31**, *Beernink '439* discloses wherein the category (“C” is “associated” with the capitalized letter category in fig. 6, item 170) is indicated by a certain color of a background (the background color is white that indicates “C” is capitalized) to the at least one of the plurality of writing symbol patterns represented by the best interpretation (fig. 6, item 168 wherein the top of the list “Correct” is the best interpretation).

Regarding **claim 32**, *Beernink '439* discloses wherein the category (“C” is “associated” with the capitalized letter category in fig. 6, item 170) is indicated by a certain color of the at

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least one of the plurality of writing symbol patterns (the color is black that indicates “C” is capitalized) represented by the best interpretation (fig. 6, item 168 wherein the top of the list “Correct” is the best interpretation).

Regarding **claim 33**, claim 1 recites identical features as in claim 33. Thus, references/arguments equivalent to those presented above for claim 1 are equally applicable to claim 33.

Regarding **claim 34**, claim 15 recites identical features as in claim 34. Thus, references/arguments equivalent to those presented above for claim 15 are equally applicable to claim 34.

### ***Claim Rejections - 35 U.S.C. § 103***

[8] The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

#### ***Beernink ‘438 in view of Beernink ‘439.***

[9] **Claim 15** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Beernink ‘438* in view of *Beernink ‘439*.

Regarding **claim 15**, while *Beernink ‘438* discloses a method for presenting a recognized handwritten symbol (fig. 6a; “handwriting recognition” at 2:13-15), comprising the steps of:

detecting (“recognizer implemented by CPU 12 to recognize ink strokes input by a user with stylus 38” at 7:19-21) a handwritten pattern (“ink strokes input” at 7:19-21; *e.g.*, fig. 8, item 95) that is entered by a user (fig.3);

recognizing (“handwriting recognition” at 2:13-15) the detected handwritten pattern, wherein said step of recognizing comprises comparing (the handwriting is compared to each of the templates) the handwritten pattern to a plurality of templates (fig. 8, item 89; *e.g.*, selected character “f” is a template),

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wherein each of the plurality of templates (*e.g.*, template “f” in fig. 8) represents at least one of a plurality of writing symbol patterns (*e.g.*, template “f” comprises four writing symbol patterns including items 95, 95b) of ways of writing symbols (the English alphabet), and

returning a best interpretation (the best interpretation is a best writing symbol pattern, *i.e.*, when the user writes “F”, it will pick the best of item 95 and that best pick is the best interpretation, the best interpretation displayed will be capital "F" as opposed to lowercase "f") of the handwritten pattern, said best interpretation being based on one of the plurality of writing symbol patterns as a best writing symbol pattern (the best writing symbol pattern is picked from the plurality of templates; *e.g.*, template "f" picked with different writing symbol patterns "f" (item 95) for which the best writing symbol pattern “f” will be picked (either item 95a or 95b) when the user writes “f”) of a best template selected from the plurality of templates (fig. 8, item 89; *e.g.*, selected character “f” is a template) that, according to a predefined rule, is most similar to the handwritten pattern (once “Letter Style” preferences are saved, *Beernink* ‘438 uses those preferences to recognize characters), wherein at least two of the plurality of templates comprise different one of the plurality of writing symbol patterns which represent different ways of writing a single symbol (each character in list item 89 has four writing symbol patterns item 95; these four writing symbol patterns are accountable for the plurality of templates of “Letter Styles” for each user), and wherein the different ones of the plurality of writing symbol patterns (*e.g.*, template “f” comprises four writing symbol patterns including items 95, 95b) of said at least two of the plurality of templates (*e.g.*, template “f” in fig. 8) return different best interpretations (each template is composed of unique and separate writing symbol patterns, so the best interpretations of those separate writing symbol patterns for each template must be different) when being most similar to the handwritten pattern; and

presenting the best interpretation on a screen (fig 3, item 52; “handwriting recognition” at 2:13-15) *Beernink* ‘438 does not disclose returning a best interpretation among multiple interpretations of the handwritten pattern in the sense of Applicant’s invention.

*Beernink* ‘439 teaches returning a best interpretation (fig. 5, item 168 wherein the top of the list is the best interpretation) among multiple interpretations (fig. 5, item 170) of a handwritten pattern (fig. 5, item 172).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made for the method of *Beernink* '438 to include returning a best interpretation among multiple interpretations of the handwritten pattern in the sense of Applicant's invention as taught by *Beernink* '439 to " provide[[s]] the user with some character strings which the recognition software believes are close matches for the ink word 172. The ink word 172 represents the original strokes which comprised the word which the user entered. Selecting the keyboard button 174 will display a keyboard window. Once the keyboard window is displayed, the user can select desired characters from the keyboard via the stylus 110.", *Beernink* '439, 10:54-61.

*Beernink* '439 in view of *Sparr et al.*

[10] **Claim 7** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Beernink* '439 in view of U.S. Pub. No. 2001/0026639 (published Oct. 4, 2001, hereinafter "*Sparr et al.*").

Regarding **claim 7**, while *Beernink* '439 discloses the method of claim 6, *Beernink* '439 does not teach wherein the step of manipulating is done in consideration of at least one characteristic in the group of translation, rotation, slant and scaling.

*Sparr et al.* teaches wherein a step of manipulating is done in consideration of at least one characteristic in the group of translation, rotation, slant and scaling (fig. 2, fig. 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the step of manipulating of *Beernink* '439 to be done in consideration of at least one characteristic in the group of translation, rotation, slant and scaling as taught by *Sparr et al.* so that "to a larger extent accept[ing] individual styles of handwritten characters and unusual fonts of typewritten characters, and is easy to implement with limited computing power.", para. 0006.

Regarding **claim 25**, claim 7 recites identical features as in claim 25. Thus, references/arguments equivalent to those presented above for claim 7 are equally applicable to claim 25.

*Beernink* '439 in view of *Kadashevich et al.*

[11] **Claim 17** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Beernink* '439 in view of U.S. Patent No. 5,970,170 (issued Oct. 19, 1999, hereinafter "*Kadashevich et al.*").

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Regarding **claim 17**, while *Beernink '439* discloses the method according to claim 16, wherein the step of presenting comprises presenting the best allograph represented by an image (fig 7, item 76) depicting the way of writing symbols of the best template, *Beernink '439* do not disclose wherein the image is a bitmap image.

*Kadashevich et al.* discloses a character recognition system identification of scanned and real time handwritten characters that includes teaching a bitmap image (8:60-67; 9:17-22; 13:16-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the image of *Beernink '439* to be a bitmap image as taught by *Kadashevich et al.* to provide an “array wherein each bit in the array represents a pixel of the...image, with the state of bit (0 or 1) representing whether the corresponding pixel is a background or foreground pixel and the location of the bit in the array representing the coordinates of the corresponding pixel in the image.”, *Kadashevich et al.*, 8:60-67.

### ***Conclusion***

[12] Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID P. RASHID whose telephone number is (571)270-1578. The examiner can normally be reached Monday - Friday 7:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on (571) 272-74155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David P Rashid/

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